

**A SYSTEM AND METHOD FOR REAL-TIME DETECTION  
AND PRESERVATION OF SPEECH ONSET IN A SIGNAL**

**ABSTRACT OF THE INVENTION**

A "speech onset detector" provides a variable length frame buffer in combination with either variable transmission rate or temporal speech compression for buffered signal frames. The variable length buffer buffers frames that are not clearly identified as either speech or non-speech frames during an initial analysis. Buffering of signal frames continues until a current frame is identified as either speech or non-speech. If the current frame is identified as non-speech, buffered frames are encoded as non-speech frames. However, if the current frame is identified as a speech frame, buffered frames are searched for the actual onset point of the speech. Once that onset point is identified, the signal is either transmitted in a burst, or a time-scale modification of the buffered signal is applied for compressing buffered frames beginning with the frame in which onset point is detected. The compressed frames are then encoded as one or more speech frames.